

The Argument for rehearing begins on page 2 of this request. The Conclusion is on page 3 of this Request.

ARGUMENT

The Board errs in affirming all rejections made by the Examiner on grounds that it would have been obvious to one of ordinary skill in the art at the time of the invention to have manipulated the conditions (e.g., concentration and rates of addition) used for mixing the sulfuric acid, hydrogen peroxide and hydrogen fluoride solutions in each of the primary references such that the temperature rise of the resulting solution was 3° C or less than the temperatures of the original components (Decision at p. 5).

The primary references disclose etching compositions that include sulfuric acid, hydrogen fluoride and hydrogen peroxide. The primary references fail to disclose, teach or suggest a method of forming a cleaning (etching) solution wherein an intermediate solution comprising 70% or less by weight sulfuric acid and hydrofluoric acid is mixed with a hydrogen peroxide solution. All of the prior art references form their compositions using 97% or 98% concentrated aqueous sulfuric acid as is commercially available (see Kuhn-Kuhnenfeld, column 1, lines 48-53). While Kuhn-Kuhnenfeld discusses the problem of spontaneous temperature rise, the solution to this problem that is offered by Kuhn-Kuhnenfeld is to slowly mix the concentrated sulfuric acid with the hydrogen peroxide solution, which fails to teach or suggest the present invention wherein the sulfuric acid is provided in a less concentrated solution prior to mixing with the hydrogen peroxide solution.

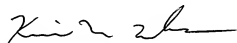
By reducing the concentration of the sulfuric acid prior to adding the aqueous sulfuric acid with the hydrogen peroxide solution, much of the heat of dilution of the sulfuric acid is released prior to mixing with hydrogen peroxide and cannot damage the hydrogen peroxide. The cited references do not suggest using dilute sulfuric acid as claimed by Applicant. Moreover, the Board errs in concluding that a method of making a solution without excessive heating by using dilute sulfuric acid is suggested by the references if known methods using concentrated sulfuric acid can make the same solution without excessive heating.

Therefore, all rejections are affirmed by the Board in error and reversal of the rejections is respectfully requested.

Conclusion

For the reasons presented above and in Applicants Briefs and Oral Argument, Applicants respectfully submit that the rejections of claims 1-5, 9-14, 17-20, 24-30, 34-38, 40, 42, 43 and 45 are improper. Thus, Applicants respectfully request reversal of the rejections to permit allowance of claims 1-5, 9-14, 17-20, 24-30, 34-38, 40, 42, 43 and 45.

Respectfully submitted,



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